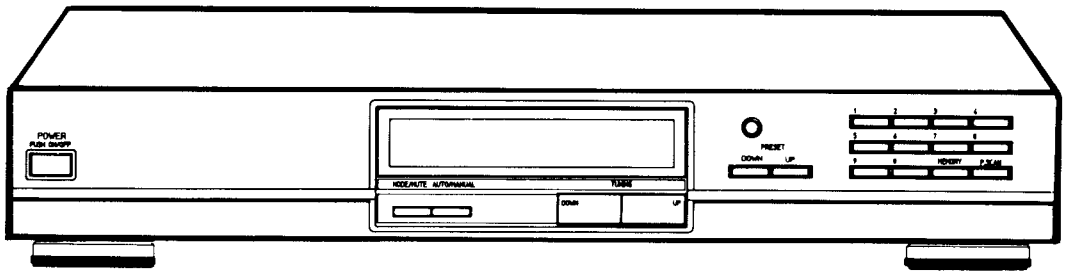
UNIVERSUM 066 3660

MODEL

SERVICE MANUAL

SAMSUNG

SERVICE MANUAL
MODEL:RS-750T
DIGITAL STEREO TUNER



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1. SPECIFICATION

FM SECTION

- Frequency range 87.5-108.1MHz
- Sensitivity 3μV
- S/N Ratio . . . . . 75 dB
- Stereo separation . . . . . 45 dB
- Total harmonic distortion . . . . . 0.15 %

MW(AM) SECTION

- Frequency range 522-1611KHz
- Sensitivity 320μV
- S/N Ratio . . . . . 40 dB
- IF Rejection . . . . . 45 dB

LW SECTION (OPTION)

- Frequency range 153-360KHz
- Sensitivity 1000μV
- S/N Ratio . . . . . 35 dB
- IF Rejection . . . . . 40 dB

GENERALS

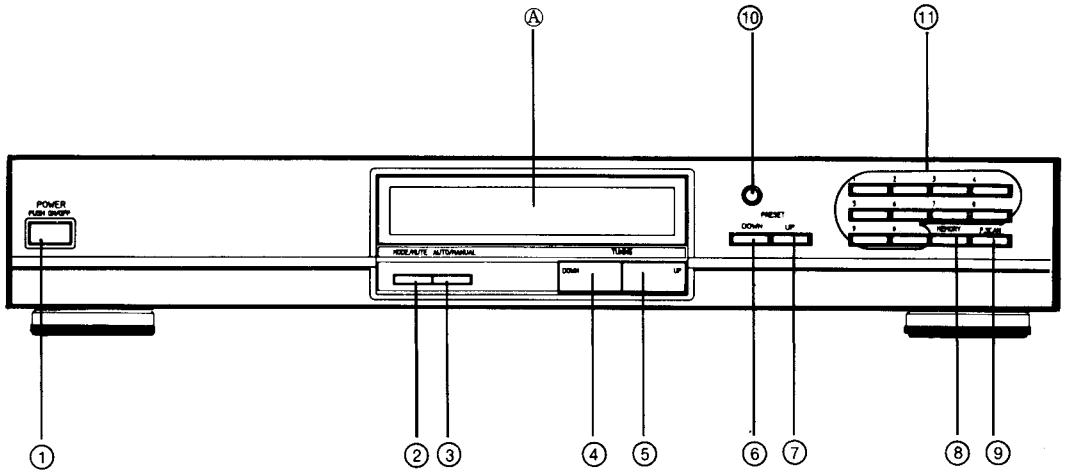
- Size (mm) . . . . . 420(W) x 60(H) x 260(D)mm

2. SERVICING NOTE

* The safety specification built into the electronics of this unit require that you use specified parts only. Do not use replacements. Using other parts can result in electrical and fire hazard.

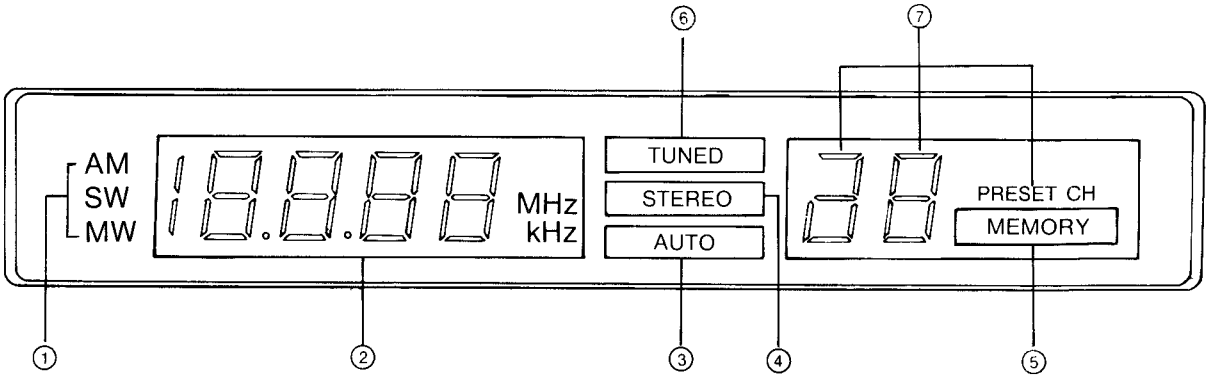
3. LOCATION AND FUNCTION

3-1. FRONT PANEL



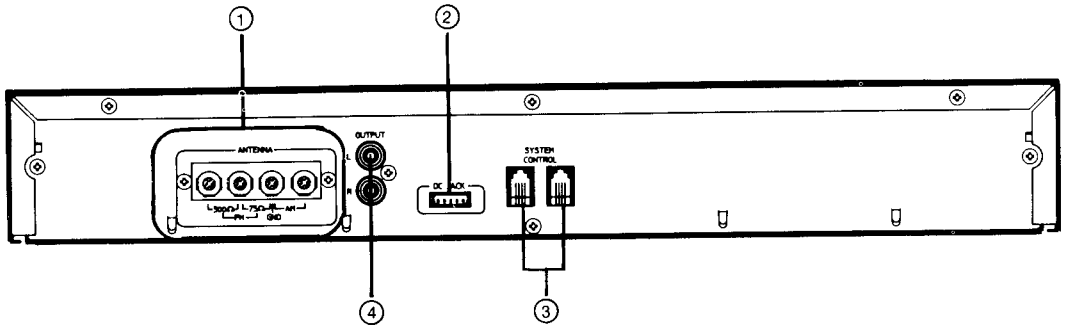
1. POWER SWITCH
2. MODE/MUTE SWITCH
3. AUTO/MANUAL BUTTON
4. TUNING DOWN BUTTON
5. TUNING UP BUTTON
6. PRESET DOWN BUTTON
7. PRESET UP BUTTON
8. MEMORY BUTTON
9. PRESET SCAN BUTTON
10. BAND SELECTOR BUTTON
11. BROADCASTING STATION PRESET SELECTOR BUTTON

2. A SECTION

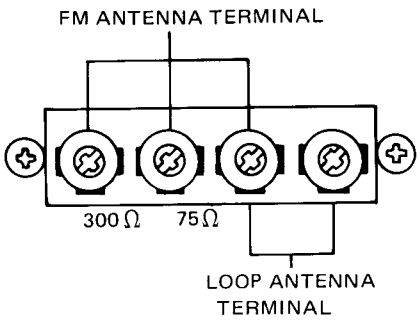


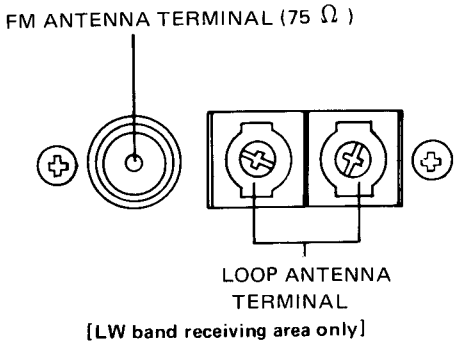
1. BAND (AM, FM, SW, MW) DISPLAY
2. FREQUENCY DISPLAY
3. AUTO DISPLAY
4. STEREO DISPLAY
5. MEMORY DISPLAY
6. TUNING DISPLAY
7. PRESET CHANNEL DISPLAY

3-2. REAR PANEL



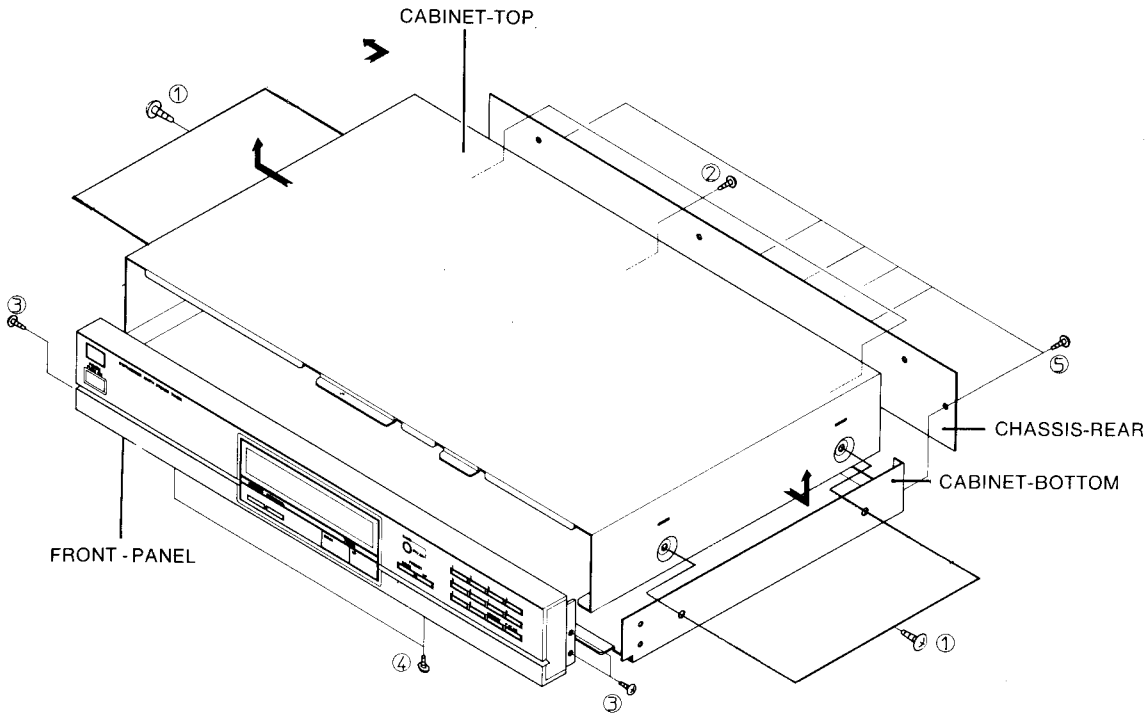
1. Antenna terminal (OPTION)





2. DC power input
3. System control connection terminal
4. Tuner output

4. DISASSEMBLY



1) CABINET TOP

REMOVE 4 SCREWS (①). REMOVE 3 SCREWS (②) AND SPRING BOTH SIDES (OF THE CABINET-TOP) OUT AND PULL UP.

2) CABINET BOTTOM

REMOVE 4 SCREWS (③). REMOVE 2 SCREWS (④) HOLDING ON THE CABINET FRONT AND PULL THE CABINET BOTTOM BACK TOWARDS YOU.

3) CHASSIS REAR

REMOVE 6 SCREWS (⑤) FROM THE CHASSIS-REAR.

5. OPERATION INSTRUCTION

1) FM

THE VOLTAGE SUPPLIED IN THE PLL CONTROL IC IS SUPPLIED TO THE FM OSCILATION CIRCUIT AND DETERMINES OSCILATION FREQUENCY. (THE FREQUENCY DETERMINED BY THE CONTROL VOLTAGE IS SUPPLIED TO THE ANT COIL, RF COIL, ETC IN THE FM FRONT END PACK AND RECEIVES BROADCASTING.
THIS FREQUENCY IS DELIVERED TO THE MIXER AFTER REALIGNING WAVE LENGTH IN RF KEEPING FREQUENCY FROM CHANGING AND ERRASING NOISE. THE ALIGNED FREQUENCY AND OSCILATION FREQUENCY ARE COMBINED IN THE MIXER AND CHANGES TO IF (INTERMEDIATE FREQUENCY).
THIS FREQUENCY IS AMPLIFIED AND REALIGNED TO THE ACCURATE IF.
(WHAT HAS BEEN DESCRIBED SO FAR HERE IS FUNCTION OF THE FM FRONT END PACK) THE RE-ALIGNED FREQUENCY PASSES ICF 2,3 AND THE IF AMPLIFIER OR IQ1 TO MAKE IT ACCURATE IF. AND THE FREQUENCY IS INPUT TO PORT1 OF LA1267 (IIC1) WHICH IS IF IC. IIC1 IS COMPOSED OF IF AMP CIRCUIT AND DETECTION CIRCUIT. IL1 AND IL2 ARE MULTIPLEX CIRCUIT TO DETECT WAVEFORM. THE DETECTED CIRCUITS OUTPUT THE AUDIO SIGNALS AND ARE INPUT TO THE MPX CIRCUIT. MPX IC MULTIPLIES SIGNALS AND OUTPUTS LEFT AND RIGHT SIGNALS THROUGH RESPECTIVE OUTPUT SECTION. WHILE PASSING THROUGH IPF, IT FILTERS THE MULTIPLIED FREQUENCY OF 19KHz AND 38KHz GENERATING THE PURE SOUND SIGNALS.

2) AM(MW, LW)

JUST LIKE FM, THE PLL CONTROL VOLTAGE DETERMINES THE OSCILATION AND ANTENNA FREQUENCY. THE ALIGNED FREQUENCY IN ANTENNA IS INPUT TO PORT21 OF IIC1 AND THE OSCILATION FREQUENCY IS INPUT TO PORT23. BOTH SIGNALS ARE COMBINED INTO INTERMEDIATE FREQUENCY AND IT IS AMPLIFIED TO ENOUGH LEVEL AT THE AMPLIFIER. OUTPUT PORT14 OUTPUTS AUDIO SIGNAL THROUGH DETECTOR SECTION AND IS INPUT TO THE MPX IC. THE MPX IC OUTPUTS THE AM(MW) OR LW SIGNALS THROUGH THE OUTPUT PORT.

3) PLL

PLL IS COMPOSED OF HIC1, UIC1 AND VIC1. HIC1 IS A PLL SYNTHESIZER IC. UIC1 IS A CONTROL IC AND VIC1 IS LCD DRIVE. IF MICOM FUNCTION SWITCH IS SELECTED TO FM, UIC1 (MICOM) CONVERTS FUNCTION TO THE FM MODE. THE FM FREQUENCY WHICH IS MEMORIZED IS DISPLAYED BY MEANS OF NUMBERS ON VLCD1 AND AT THE SAME TIME THE UNIT GOES INTO FM MODE BY OBTAINING SIGNALS IN HIC. PORT 10 OF HIC BECOMES "LOW" STATUS AND THE FUNCTION SELECTOR TR OPERATES TO MAKE CIRCUIT OPERATION FM MODE BY SUPPLYING POWER TO EACH PORT. WHEN POWER SOURCE IS SUPPLIED TO THE FM, FM OSC (F) SIGNAL IS INPUT TO THE PORT14 OF HIC1 IN THE FRONT END AND LOWER THE FREQUENCY WHICH CAN BE CONTROLLED DEVIDING SIGNALS IN THE HIC1.
THE INPUT FREQUENCY DISPLAYS THE CURRENT FREQUENCY BEING RECEIVED NOW BY LETTER IN LCD (VLCD1) PASSING LCD DRIVE IC (VIC1).

4) BAND SELECTOR

BAND SELECTOR CIRCUIT CONSISTS OF HQ1, HQ2 AND HQ3. IF CONVERTED TO FM MODE, PORT 10 OF PLL IC (HIC1) BECOMES "LOW", HQ IS ON AND FM VOLTAGE IS APPLIED TO EACH PORT. IF CONVERTED TO AM, PORT9 BECOMES LOW, MQ IS ON AND AM VOLTAGE IS APPLIED TO EACH PORT. IN LW BAND, PIN8 OF PLL IC BECOMES LOW, HQ3 IS "ON" AND LW VOLTAGE ARE APPLIED. WHEN BAND IS CONVERTED, PIN9 AND PIN10 OPERATE THE OTHER WAY. WHEN THE BAND CHANGES, IF ONE OF 3 PINS(8, 9, 10) BECOMES "LOW" OTHERS BECOMES "HIGH". IF AM(MW, LW) AND FM VOLTAGE ARE APPLIED AT THE SAME TIME, IF IC (IIC1) WON'T OPERATE.

5) MODE/MUTE OPERATION

1. IF THE TUNING SIGNALS ARE DETECTED IN THE PORT8 OF IF IC (IIC1) AND THE SIGNALS ARE READ BY THE PIN12 OF CONTROL IC (UIC1), FM MUTE TERMINAL WILL BE LOW, PIN11 OF MPX IC BECOMES LOW AND VCO KILLER CIRCUIT WILL NOT OPERATE. THEREFORE OUTPUTS STEREO SIGNAL.
   BUT WHEN THE UNIT RECEIVES LOWER LEVEL OF FREQUENCY THAN MUTE LEVEL, IIC1 WON'T OPERATE. (TUNING SIGNAL WON'T BE DETECTED IN THE IIC1) AND FM MUTE OF UIC1 BECOMES HIGH, OPERATING MUTE CIRCUIT.
2. WHEN FM MUTE IS OFF (MONO)
   WHEN FM MUTE IS OFF, B+ IS READ IN THE PIN11 OF MIC1 THROUGH MR11 MO3 VCO KILLER CIRCUIT AND MONO SIGNAL IS GENERATED IN THE OUTPUT .
3. WHEN BAND SELECTOR TR HQ1 (3BAND: HQ2 OR HQ3) IS ON, HIGH LEVEL OF SIGNALS ARE READ IN THE PIN11 OF MIC1 THROUGH HD1, ID2, MD5 AND OPERATE THE VCO KILLER CIRCUIT OF MPX IC THEREFORE FM MUTE TERMINAL BECOMES "LOW" AND SOUND SIGNALS ARE GENERATED TO THE OUTPUT.

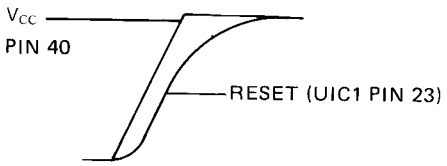
6) MICOM(LC6520H ; UIC1)

PIN-NO	PIN-NAME	IN *i*	OUT ○	OPERATION	ACTIVE	
					H	L
1	FM MUTE	—	○	FM MUTE: HIGH	MUTE ON	
2	POWER ON	—	—	POWER ON CHECK	POWER ON	
3–6	FM IF COUNT	*i*	—	FM IF COUNT: LOW		
	OPTION			LOW		
7–10	DATA, CLOCK	—	○	LCD CONTROL IC OUTPUT		
	CE, $\overline{INH}$					
11	STEREO	*i*	—	FM STEREO	STEREO ON	
12	TUNNING	*i*	—	TUNNING	TUNED ON	
13	OPTION			NC		
14	ST IN	*i*	—	AUTO STOP SIGNAL INPUT	AUTO STOP	
15–18	DATA, CLOCK	—		LM 7000(PLL) IC CONTROL OUTPUT		
	CE, STRQ		○			
19–20	TEST, VSS	—	—	GND		
21–22	OSC1, OSC2	*i*	○	4MHz OSC		
23	$\overline{RES}$	*i*	—	RESET	RESET	
24–27	DATA, CLOCK, CE	*i*	○	SYSTEM CONTROL		
28–29	KEY MATRIX	*i*	—	KEY MATRIX INPUT		
40	VDD	—	—	B^+		
41	A, MUTE	—	○	SIGNAL MUTE	SIGNAL MUTE ON	
42	POWER OFF	—	○	POWER ON: HIGH		
				POWER OFF: LOW		

6. TROUBLE SHOOTING

1. POWER PROBLEM : CHECK MAIN POWER VOLTAGE WHICH IS INPUT FROM AMP.
   CHECK VOLTAGE OF EACH ZENOR DIODE.

2. LCD PROBLEM : CHECK WAVEFORM OF RESET CIRCUIT.



CHECK THE VOLTAGE OF VIC1 PIN 56, 58.
CHECK THE VOLTAGE OF UIC1 PIN 40.

3. BAND SELECTION AND PRESET MEMORY SWITCH PROBLEM : CHECK THE WAVEFORM OF UIC1 PIN 28 – 39 IF THERE IS NO PULSE WHEN SW IS ON, CHECK SWITCH FAULT (DAMAGE OR SHORT) OR PATTERN DISCONNECTION AND SHORT. REPLACE UIC1 IF NOTHING IS WRONG WITH THEM.

4. FM.AM (MW, LW) PROBLEM : CHECK THE HQ1, HQ2 BAND SWITCHING OPERATION.
   WHEN HQ1 AND HQ2 IS ON OR HQ1 AND HQ3 IS ON AT THE SAME TIME, LA1267 IC WON'T OPERATE. CHECK IF THE VOLTAGE OF TP3 TEST POINT VARIES.
   IF THE VOLTAGE DOESN' T CHANGE, CHECK IF THE LM 7000 1,20 PORT OSCILATES.
   IF THERE IS NO OSCILATION, REPLACE 7.2MHz X-TAL.

5. " TUNED " IS SHOWN ON LED BUT NO OUTPUT. : CHECK IF"H" VOLTAGES OF MQ2L/R BASE IS READ.

6. MODE/MUTE MALFUNCTION : CHECK THE VOLTAGE OF MPX IC11 PORT
   MODE SW ON (STEREO) : APPROX. 5V
   MODE SW OFF (MONO) : APPROX. 8V

7. IC PORT VOLTAGE IS OK BUT AM BAND NOT WORKING. : CHECK DISCONNECTION OR SHORT OF ANT COIL (OL3).

7. TROUBLE SHOOTING PROCEDURE

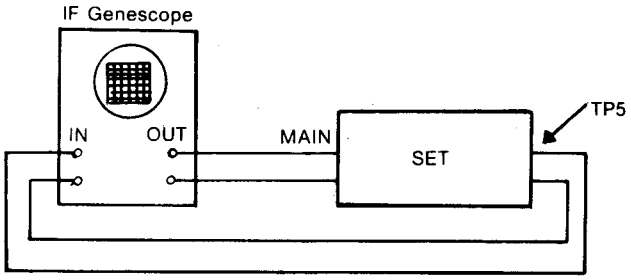
<table>
<tr><th>STEP</th><th>ITEM</th><th>TEST POINT AND STATUS</th></tr>
<tr><td>1</td><td>CHECK MAIN POWER SOURCE
AND VOLTAGES IN THE
POWER SUPPLY SECTION</td><td>RZD1 : 5.6V
RZD2 : 13V
RQ1 EMITTER : 13.6V</td></tr>
<tr><td>2</td><td>CHECK IC VCC VOLTAGE
CHECK VOLTAGE IN THE
FRONT END PACK</td><td>PIN7 LA 1267 : 12V
PIN1 KA 2265 : 12V
F.E.P B'PIN : 12V
PIN56, 58 LC 7582 : 5V
PIN15, 16 LM 7000 : 5V
PIN40 LC 6520H : 5V</td></tr>
<tr><td>3</td><td>CHECK KEY MATRIX</td><td>CHECK WAVE FORM OF PIN 28 – 39 LC6520H
WHEN SWITCH IS ON </td></tr>
<tr><td>4</td><td>CHECK BAND SWITCHING
OPERATION OF LM7000</td><td>2BAND
<table>
<tr><td></td><td>FM</td><td>AM</td></tr>
<tr><td>PIN 8</td><td>L</td><td>H</td></tr>
<tr><td>PIN 10</td><td>H</td><td>L</td></tr>
</table>
3 BAND
<table>
<tr><td></td><td>FM</td><td>MW</td><td>LW</td></tr>
<tr><td>PIN 8</td><td>H</td><td>H</td><td>L</td></tr>
<tr><td>PIN 9</td><td>L</td><td>H</td><td>H</td></tr>
<tr><td>PIN 10</td><td>H</td><td>L</td><td>H</td></tr>
</table></td></tr>
<tr><td>5</td><td>CHECK VOLTAGE OF
TP3 TEST PIN</td><td>2 BAND
<table>
<tr><td></td><td>FM</td><td>AM</td></tr>
<tr><td>LOW COVER</td><td>3V</td><td>0.9V</td></tr>
<tr><td>HIGH COVER</td><td>8V</td><td>9V</td></tr>
</table>
3 BAND
<table>
<tr><td></td><td>FM</td><td>MW</td><td>LW</td></tr>
<tr><td>LOW COVER</td><td>3V</td><td>0.9V</td><td>0.9V</td></tr>
<tr><td>HIGH COVER</td><td>8V</td><td>9V</td><td>8V</td></tr>
<tr><td>TEST POINT</td><td>HR 10</td><td colspan="2">TP3</td></tr>
</table></td></tr>
<tr><td>6</td><td>CHECK VOLTAGE OF
EACH IC PIN</td><td>SEE VOLTAGE CHART</td></tr>
</table>

8. ALIGNMENT INSTRUCTION

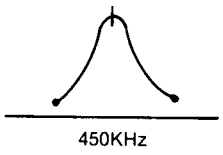
ADJUSTMENTS TO THIS UNIT HAVE BEEN MADE DURING PRODUCTION PROCEDURE, NO OTHER ADJUSTMENT IS NECESSARY. IF ADJUSTMENT IS REQUIRED, PROCEED WITH THE FOLLOWING INSTRUCTIONS IN ORDER.

1) AM IF ADJUSTMENT

CONNECT INPUT OF THE IF GENE-SCOPE TO IC16 (C-M) AND CONNECT OUTPUT TO THE AM ANT PORT.

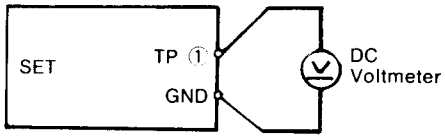


IF	READING	ADJUSTMENT POINT
450KHz	MAXIMUM	IL3



2) AM COVER ADJUSTMENT

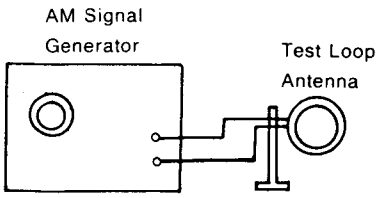
CONNECT DC VOLTMETER TO TEST POINT 1 AND GND.

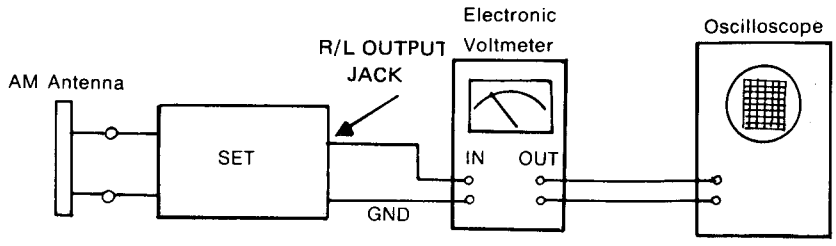


NO	FREQUENCY	READING	ADJUSTMENT POINT	NOTE
1	522KHz	0.9V	OL1	2BAND
2	1611KHz	9V	OTC1	
3	REPEAT 1 AND 2 SEVERAL TIMES			

NO	FREQUENCY	READING	ADJUSTMENT POINT	NOTE
1	153KHz	0.9V	OL2	LW BAND
2	360KHz	8V	OTC2	
3	REPEAT 1 AND 2 SEVERAL TIMES			

3) AM TRACKING ADJUSTMENT



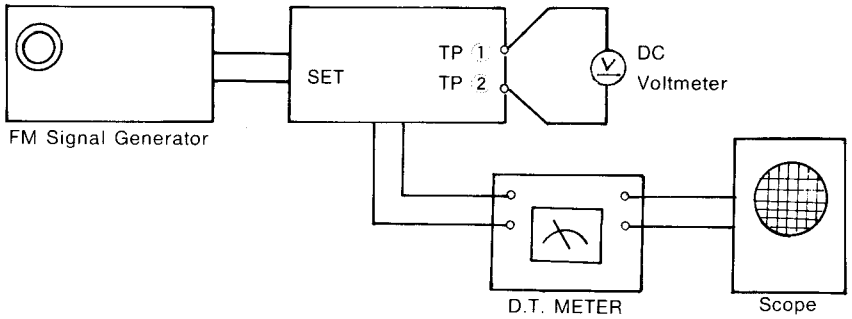


NO	FREQUENCY	READING	ADJUSTMENT POINT	NOTE
1	594KHz	MAXIMUM SENSIBILITY	OL3	2BAND
2	1404KHz	MAXIMUM SENSIBILITY	OTC3	
3	REPEAT 1 AND 2 SEVERAL TIMES			

NO	FREQUENCY	READING	ADJUSTMENT POINT	NOTE
1	175KHz	MAXIMUM SENSIBILITY	OL4	LW BAND
2	320KHz	MAXIMUM SENSIBILITY	OTC4	
3	REPEAT 1 AND 2 SEVERAL TIMES			

4) FM IF CENTER AND DISTORTION ADJUSTMENT

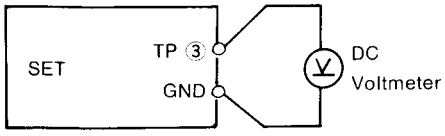
CONNECT DC VOLTMETER TO THE TEST POINT ① AND ②
CONNECT FM GENERATOR TO FM ANT TERMINAL.
CONNECT DC METER TO THE OUTPUT JACK OF A SET



No.	ADJUSTMENT ITEM	FREQUENCY	S.S.G OUT	READING	ADJUSTMENT POINT
1	IF CENTER ADJUSTMENT	98MHz	1mV (60dB)	OV	IL1
2	DISTORTION ADJUSTMENT	98MHz	1mV (60dB)	D/T MIN	IL2

5) FM COVER ADJUSTMENT

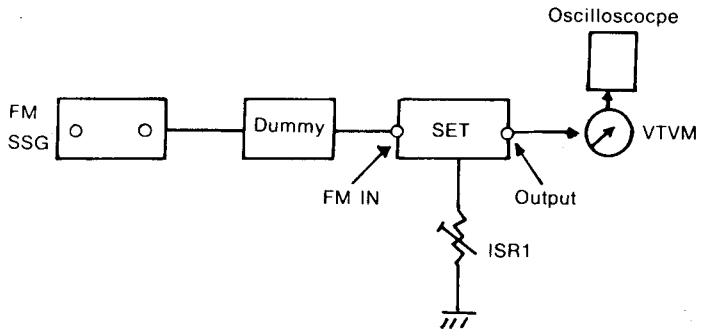
CONNECT DC VOLTMETER TO THE TEST POINT ③ AND GND.



FREQUENCY	READING	ADJUSTMENT POINT	NOTE
87.5MHz	3V	FM OSC	2 BAND

HIGH COVER AND TRACKING ADJUSTMENT DO NOT NEED.

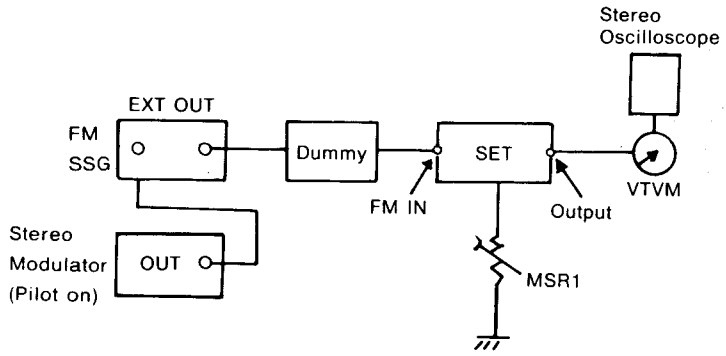
6) FM MUTING AND AUTO TUNING LEVEL ADJUSTMENT



ADJUST ISR1 SO THAT "TUNED" DISPLAYS IN LCD

FM SSG OUTPUT	READING	ADJUSTMENT POINT
14 μV (23dB)	"TUNED" LAMP ON	ISR1

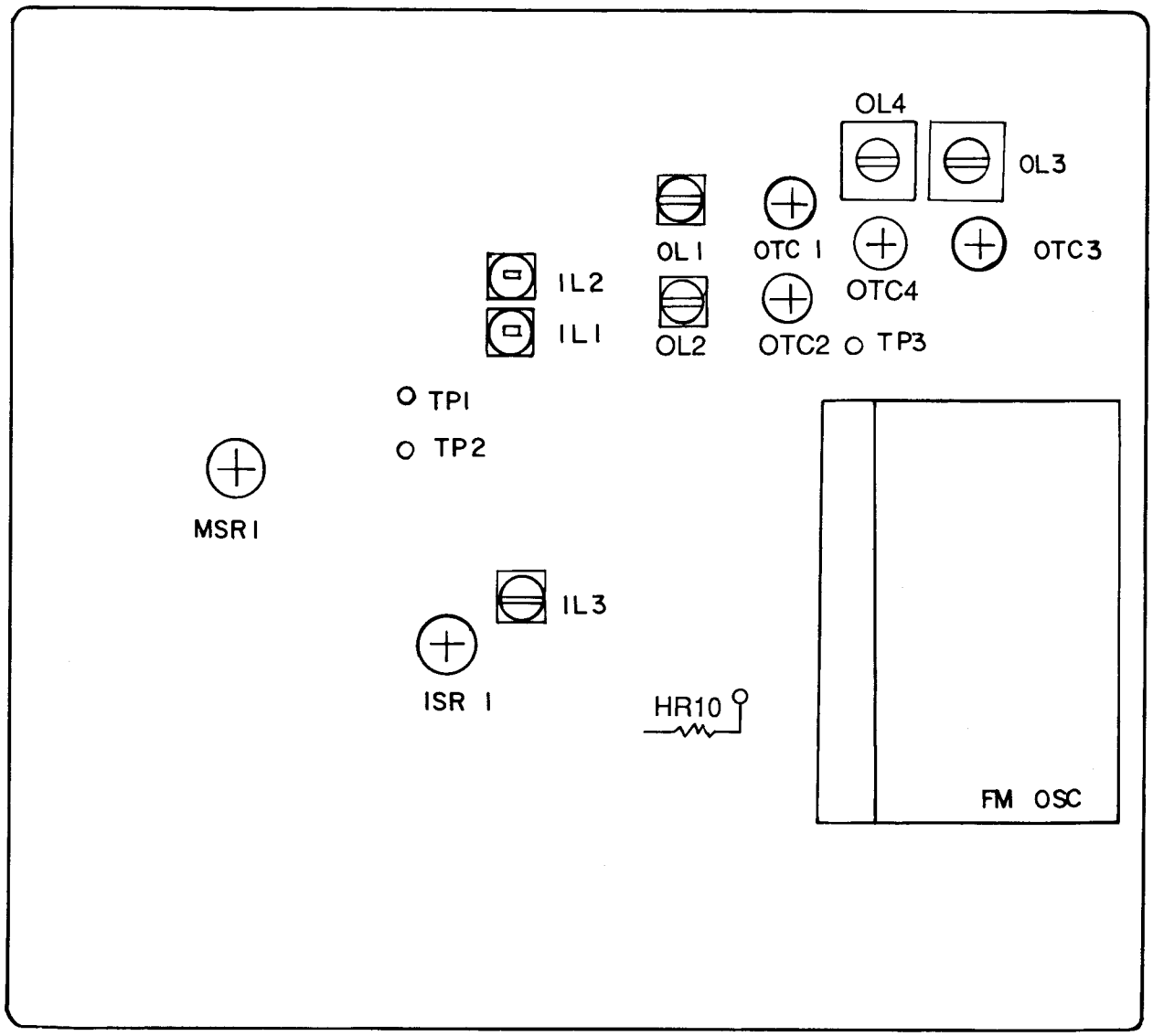
7) FM STEREO SEPARATION ADJUSTMENT (MPX)



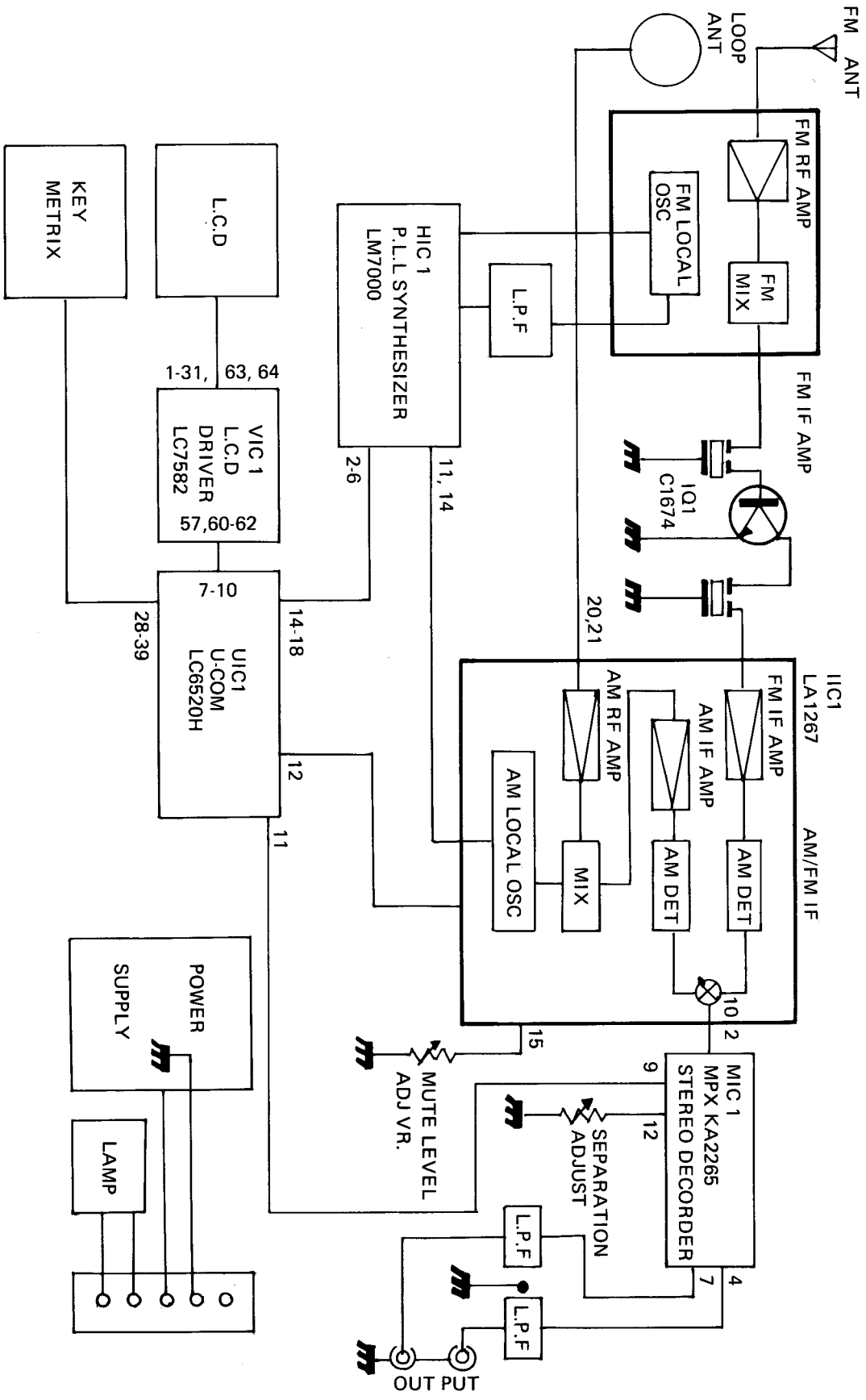
FM SSG OUTPUT	READING	ADJUSTMENT POINT
1mV (60dB)	MAXIMUM DIFFERENCE (L, R-CH)	MSR1

* WHEN ADJUSTING THE SEPARATION, IF L-CHANNEL IS INPUT, R-CHANNEL SHOULD BE MINIMUM OR VISA VERSA

9. ALIGNMENT POINT LOCATION

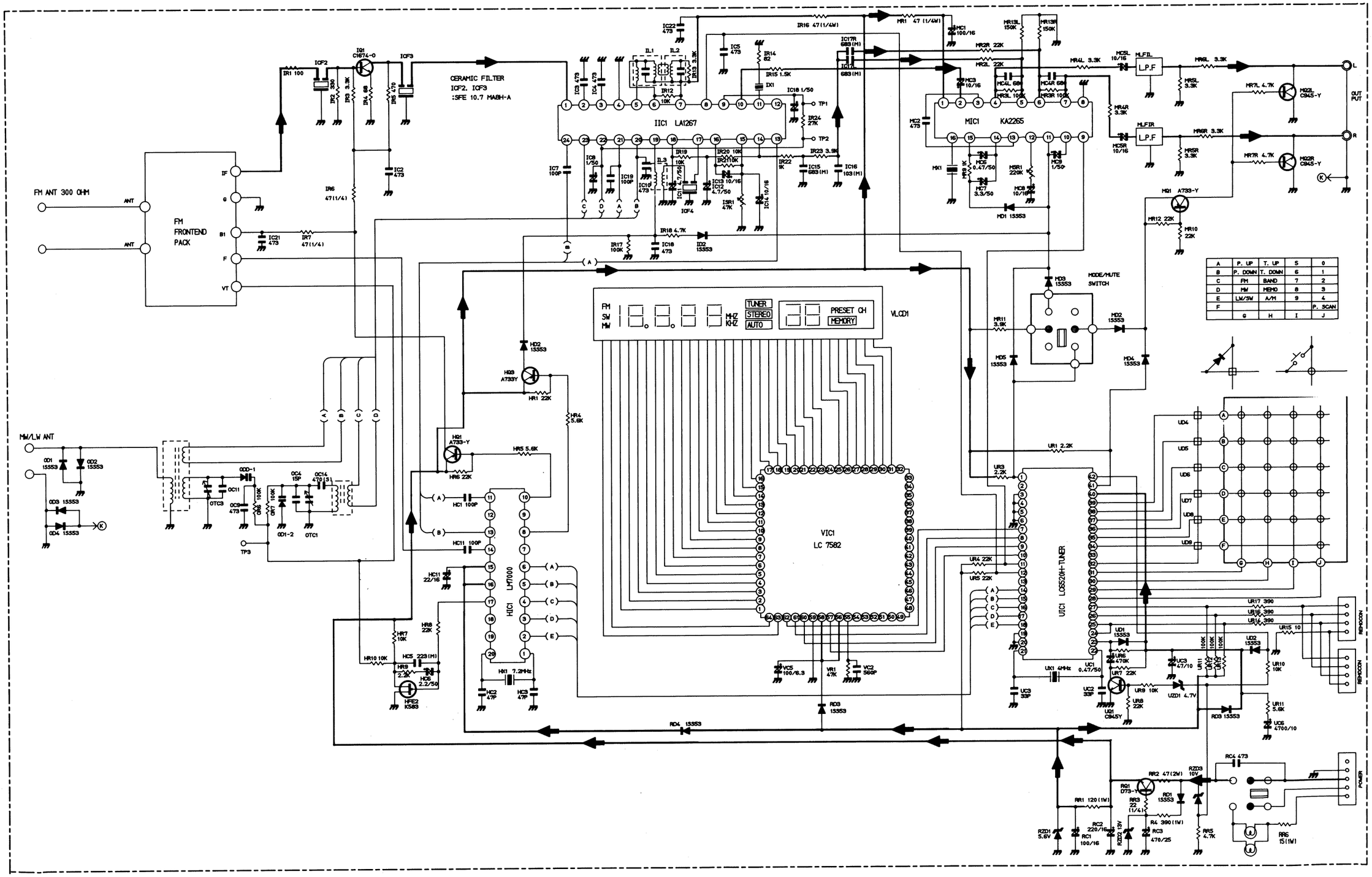


10. BLOCK DIAGRAM



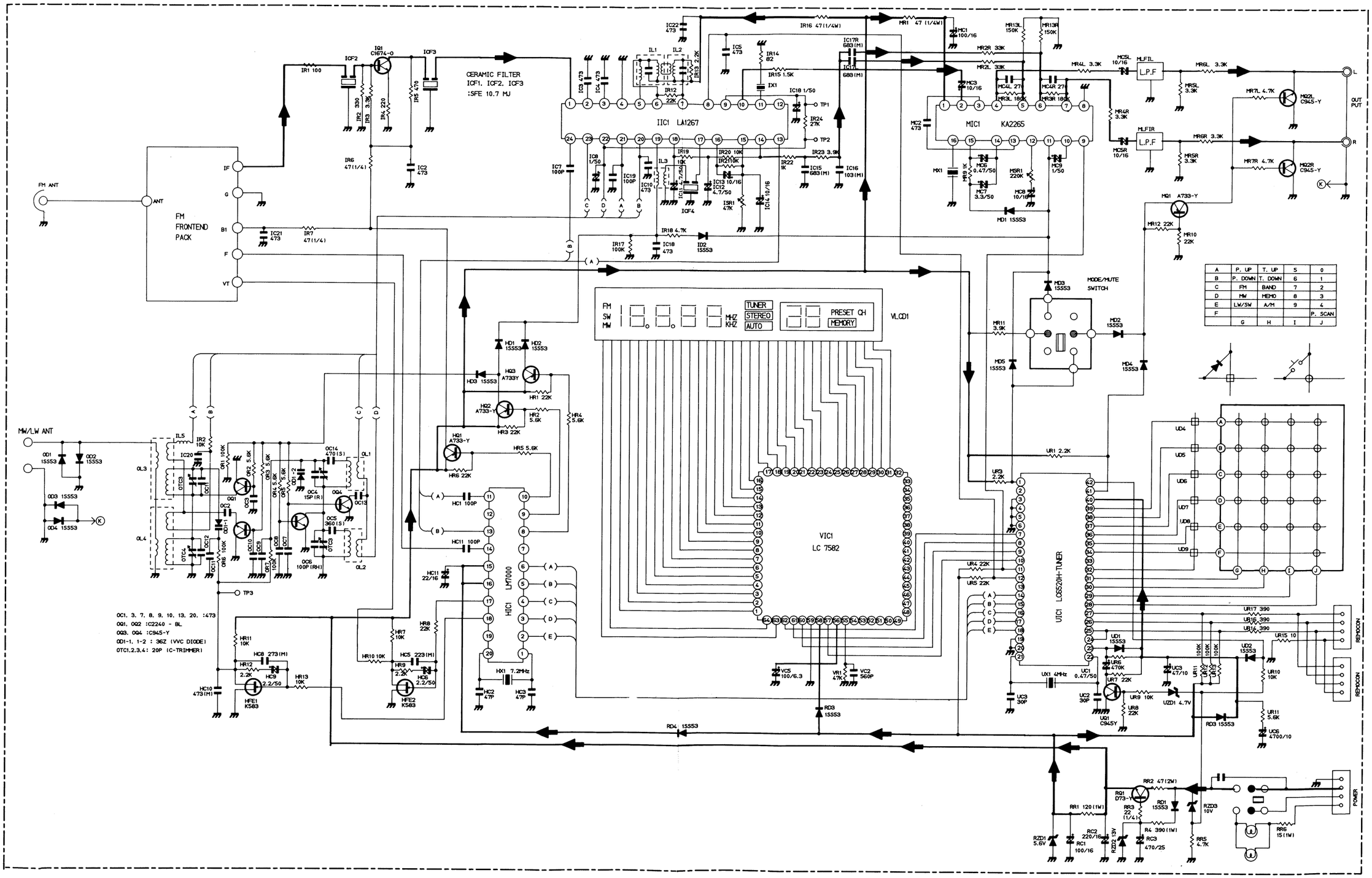
11. SCHEMATIC DIAGRAM

11-1 2 BAND (OPTION)



A	P. UP	T. UP	5	0
B	P. DOWN	T. DOWN	6	1
C	FM	BAND	7	2
D	MW	MEMO	8	3
E	LW/SW	A/M	9	4
F				P. SCAN
	G	H	I	J

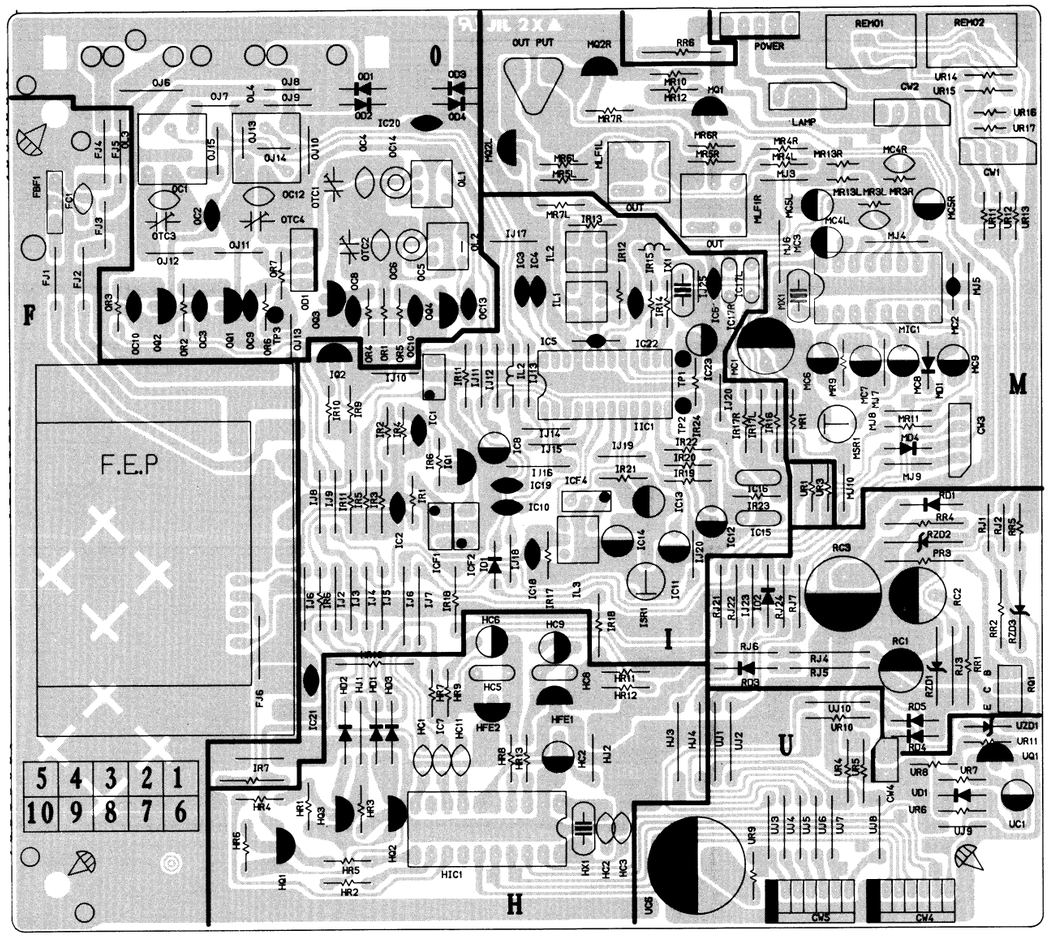
11-2 3 BAND (OPTION)



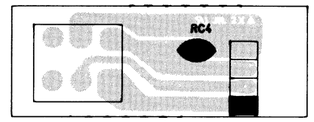
A	P. UP	T. UP	5	0
B	P. DOWN	T. DOWN	6	1
C	FM	BAND	7	2
D	MW	MEMO	8	3
E	LW/SW	A/M	9	4
F				P. SCAN
	G	H	I	J

12. CIRCUIT BOARD DIAGRAM (PATTERN SIDE)

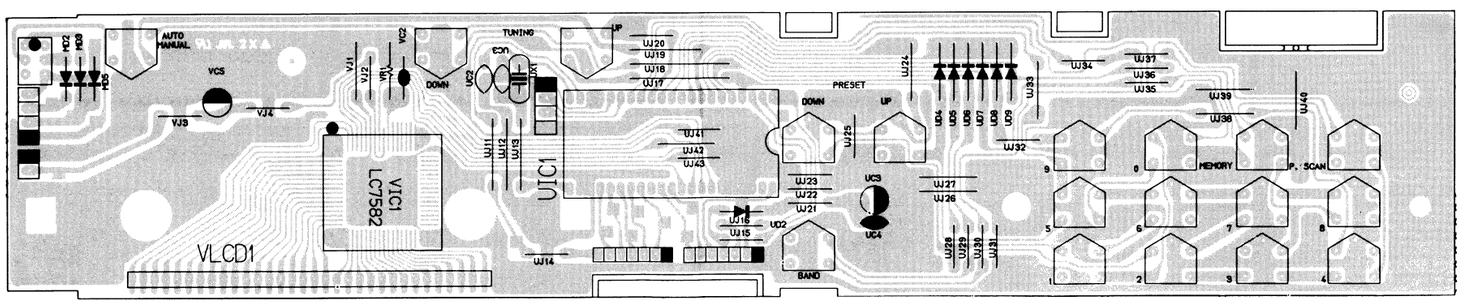
12—1. MAIN PCB



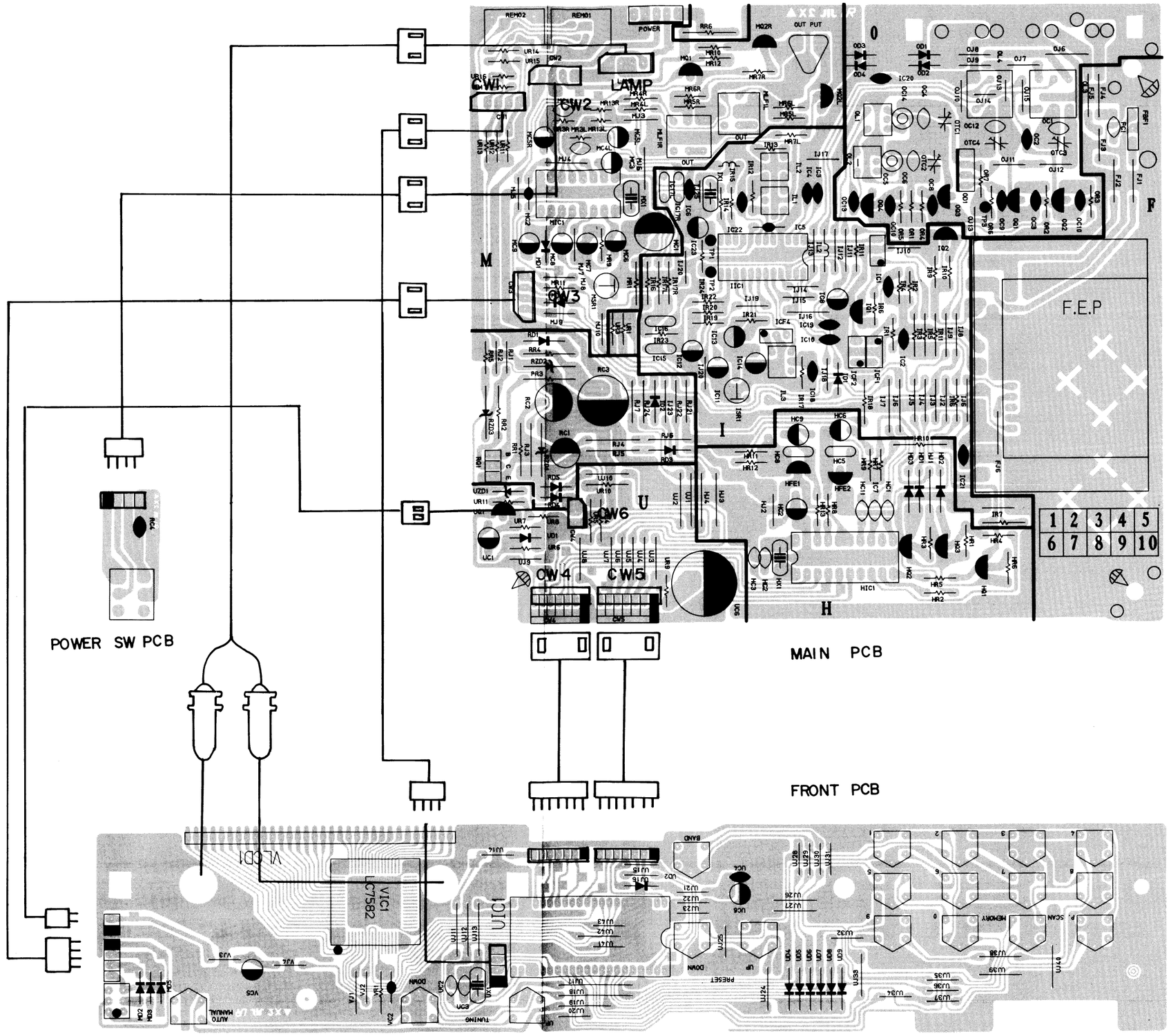
POWER PCB



12—2. FRONT PCB

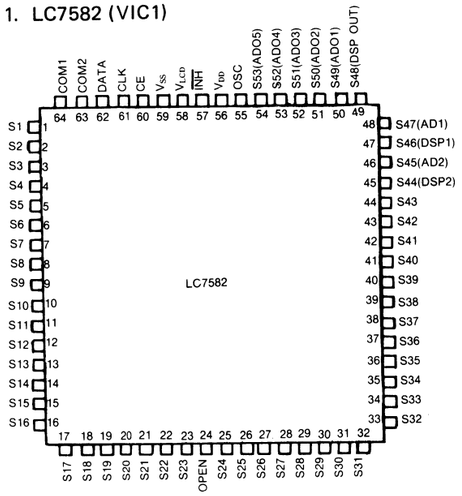


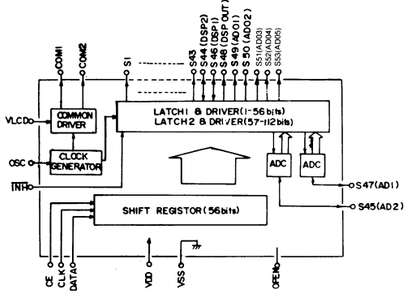
13. WIRING DIAGRAM (MARKING SIDE)



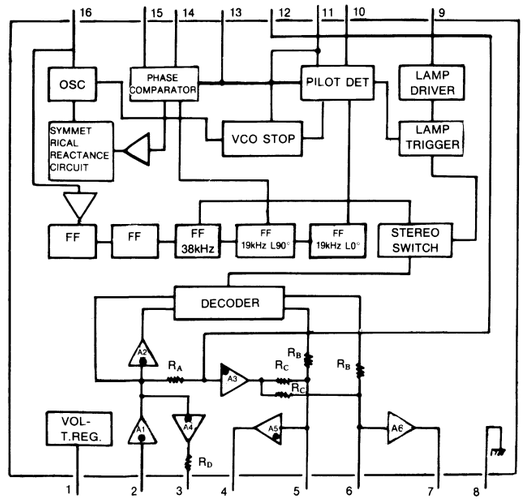
14. TR AND IC LEAD LAYOUT

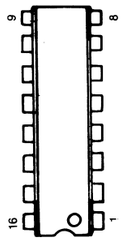
1. LC7582 (VIC1)



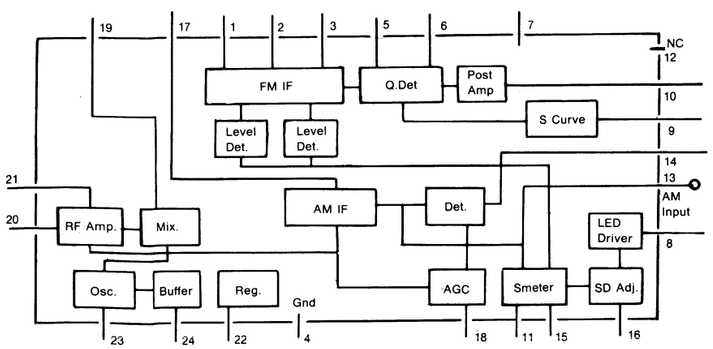


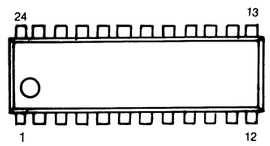
2. KA2265 (MIC1)



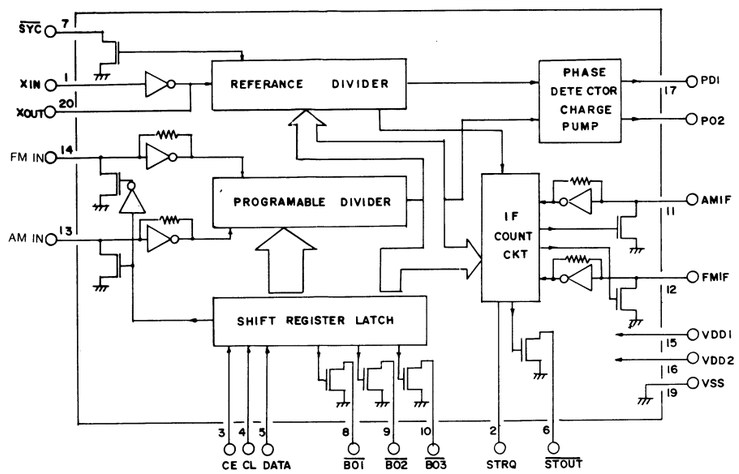


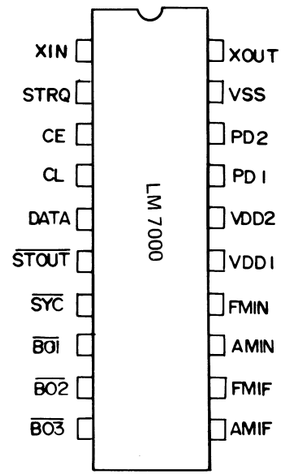
3. LA1267 (IIC1)



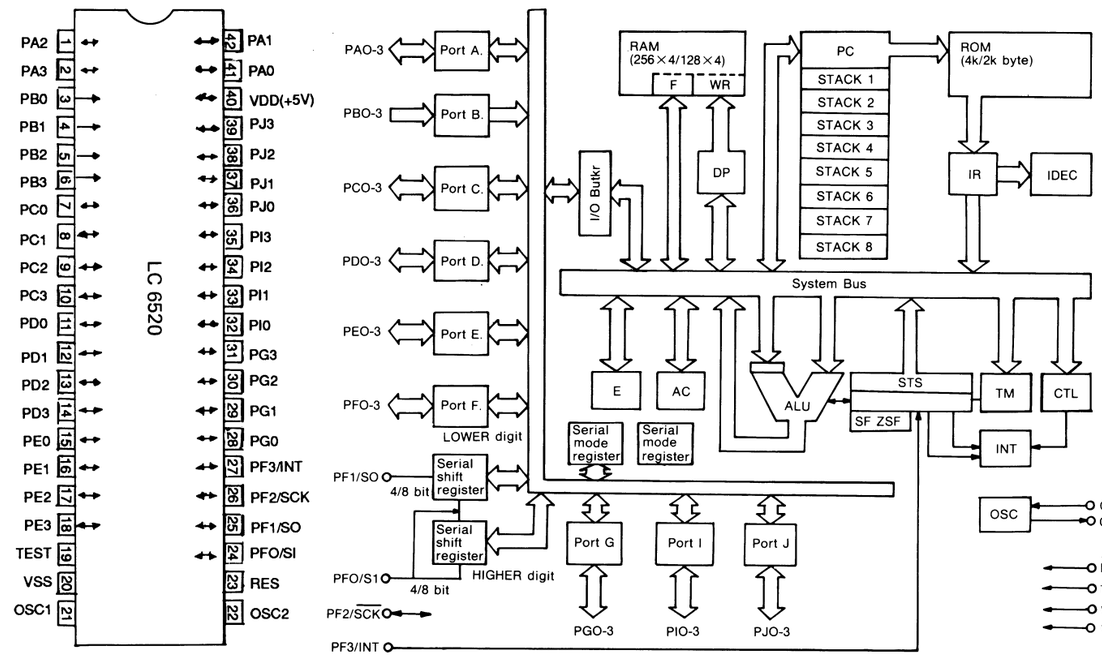


4. LM7000 (HIC1)



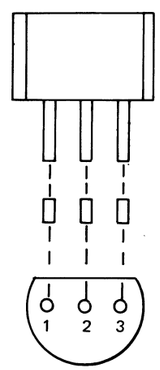


5. LC6520H (UIC1)



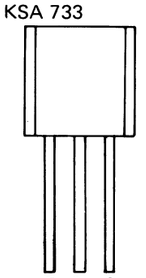
6. TR

K583 (HFE1, HFE2)

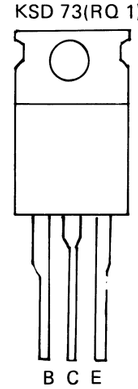


1. DRAIN
2. SOURCE
3. GATE

KSC 1674
KSC 2240
KSC 945
KSA 733



KSD 73(RQ 1)



15. TR AND IC VOLTAGE READING

1) HIC1(LM7000)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FM	1.6	0	0	0	0	5.3	0	12.5	12.6	0.4	0	0	0	2.7	5.2	5.2
AM (MW)	1.6	0	0	0	0	5.3	0	12.5	0.4	12.6	0	0	1.8	0	5.2	5.2
LW	1.6	0	0	0	0	0	0	0.4	12.6	12.6	0	0	1.8	0	5.2	5.2

PIN	17	18	19	20
FM	1.1	1.1	0	1.4
AM (MW)	1.0	1.0	0	1.4
LW	1.1	1.0	0	1.4

* VOLTAGE TEST CONDITION
1) LW: 153KHz PRESET 11
2) AM(MW): 522KHz PRESET 6
AUTO MODE/MUTE ON
3) FM: 87.5MHz PRESET 1
AUTO MODE/MUTE ON

2) UIC1(LC6520H)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FM	5.3	5.3	0	0	0	0	0	0	0.4	5.3	5.9	5.9	5.3	5.3	0	0
AM (MW)	0	5.3	0	0	0	0	0	0	0.4	5.3	5.9	5.9	5.3	5.3	0	0
LW	0	5.3	0	0	0	0	0	0	0.4	5.3	5.9	5.9	5.3	5.3	0	0

PIN	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
FM	0	0	0	0	2.1	2.3	5.2	5.8	5.8	5.8	5.8	0	0	0	0	0
AM (MW)	0	0	0	0	2.1	2.3	5.2	5.8	5.8	5.8	5.8	0	0	0	0	0
LW	0	0	0	0	2.1	2.3	5.2	5.8	5.8	5.8	5.8	0	0	0	0	0

PIN	33	34	35	36	37	38	39	40	41	42
FM	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	0.2	5.8
AM (MW)	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	0.2	5.8
LW	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	0.2	5.8

3) MIC1(KA2265)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FM	12	3.2	3.2	6.9	3.2	3.2	6.8	0	5.9	2.3	4.9	3.2	3.4	3.9	4.6	2.0
AM (MW)	12	3.2	3.2	6.9	3.2	3.2	6.8	0	5.9	2.3	7.1	3.2	5.0	5.0	5.8	2.0
LW	12	3.2	3.2	6.9	3.2	3.2	6.8	0	5.9	2.3	7.1	3.2	5.0	5.0	5.8	2.0

4) IIC1(LA1267)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FM	2.5	2.5	2.5	0	11.6	11.6	11.6	5.9	4	3.2	1.5	0	1.1	1.5	0
AM (MW)	1.0	1.0	1.0	0	11.7	11.7	11.7	5.9	3.7	3.1	1.5	0	1.1	1.5	0
LW	1.0	1.0	1.0	0	11.7	11.7	11.7	5.9	3.7	3.1	1.5	0	1.1	1.5	0

PIN	16	17	18	19	20	21	22	23	24
FM	0	2.5	1.5	0	0	0	4	4	4.1
AM (MW)	0	1.1	1.5	12.0	2.0	2.0	3.8	3.8	1.7
LW	0	1.1	1.5	12.0	2.0	2.0	3.8	3.8	1.7

5) VIC1(LC7582)

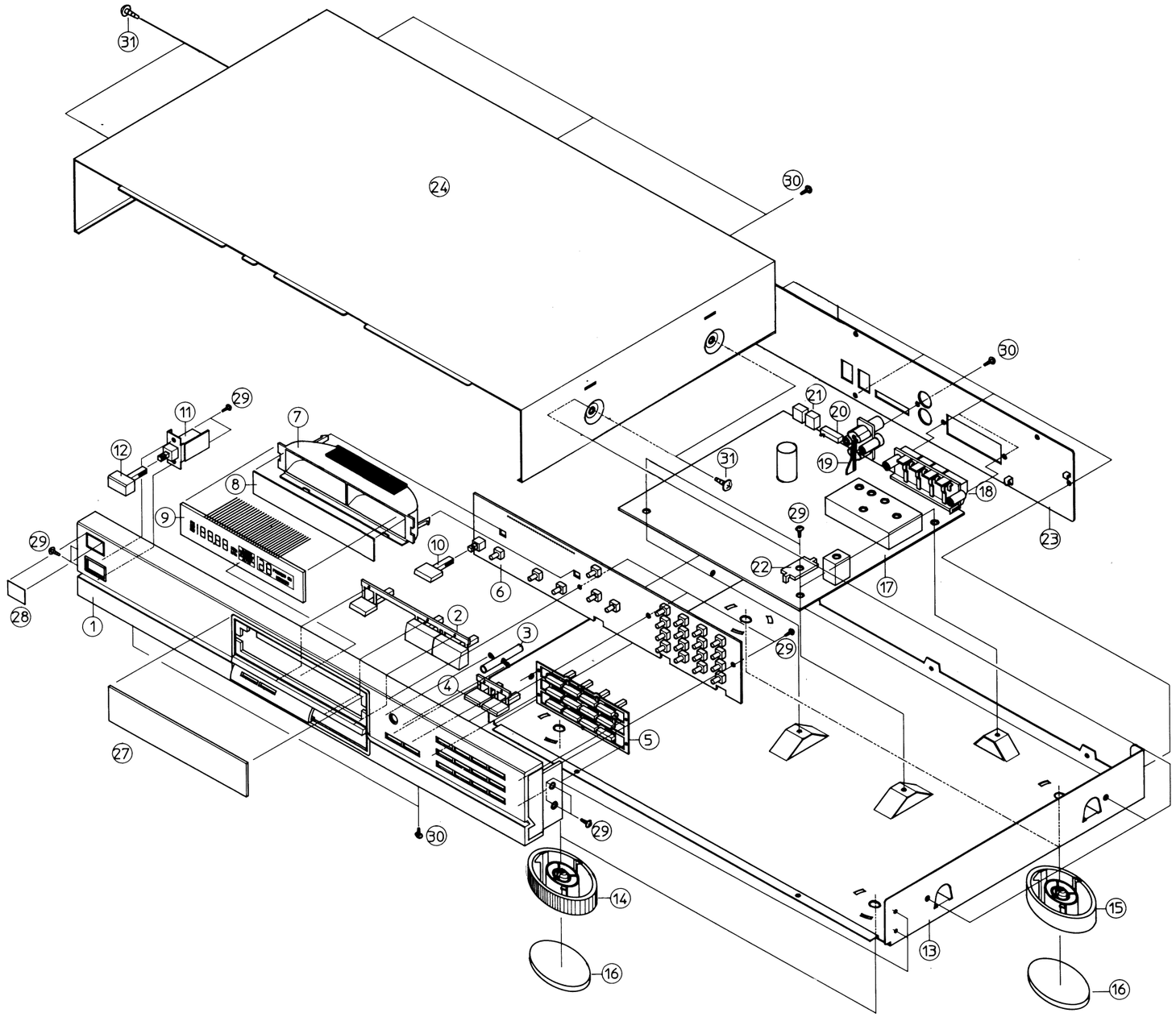
PIN	1 – 54	55	56	57	58	59	60	61	62	63	64
FM	2.7	4.1	5.3	5.3	5.3	0	0.4	0	0	2.7	2.7
AM (MW)	2.7	4.1	5.3	5.3	5.3	0	0.4	0	0	2.7	2.7
LW	2.7	4.1	5.3	5.3	5.3	0	0.4	0	0	2.7	2.7

6) TR

TR	IQ1			HQ1			HQ2			RQ1			MQ2L			MQ2R			UQ1		
	FM	AM (MW)	LW	FM	AM (MW)	LW	FMQ	AM (MW)	LW	FM	AM (MW)	LW	FM	AM (MW)	LW	FM	AM (MW)	LW	FM	AM (MW)	LW
E	0.3	0	0	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	0	0	0	0	0	0	0	0	0
B	1.1	0	0	11.9	12.6	12.6	12.6	12.6	12.6	13	13	12.6	0.7	0	0	0.7	0	0	0.6	0.6	0.6
C	1.1	0	0	12.6	0	0	–2.5	12.6	0	19	19	19	0	0	0	0	0	0	0	0	0

TR, FET	HFE2		HFE2			IQ2		HFE1		
	FM	AM	FM	MW	LW	FM	AM	FM	MW	LW
D	1.5	0.8	2.4	2.8	2.8	0.4	0	0.9	0.9	0.9
S	0	0	0	0	0	1.1	0	0	0	0
G	1.2	1.2	1.1	1.0	1.1	11.5	0	1.0	1.0	1.0
REMARK	2 BAND (FM AM) REGION		3 BAND (FM, MW, LW) REGION			2 BAND REGION		3 BAND REGION ONLY		

16. EXPLODED VIEW



17. PARTS DESCRIPTION

17-1. ELECTRIC PARTS

LOCATION NO.	CODE NO.	DESCRIPTION AND SPECIFICATION	Q'TY	NEW	NOTE
RR1	11048-477-121	R-METAL OXIDE; RS1T 120-J MINI TYPE	1		
RR2	11048-577-470	R-METAL OXIDE; RS2T 47-J MINI TYPE	1		
UC2	11448-010-223	CONDENSER AXIAL LEAD; 25V TP 050F2200-Z	1		
IC1, IC2, IC3, IC4, IC10, IC21	11449-010-473	CONDENSER AXIAL-LEAD; 50V UP F4700-Z	6		
IC5, IC18, MC2, OC7, OC8, OC9			6		
OC10, OC1, OQ3, OC13, OC20, RC4			6		
OTC1, OTC3	11829-512-030	C-TRIMMER; TZ03R 20P	2		
LAMP	12058-570-825	LAMP; DC12V 60MA 250M/M (WAFER)	1	★	
UIC1	12109-401-240	IC-U COM; 6520H-4293 TUNER	1	★	
VIC1	12109-401-260	IC-LCD DRIVER; LC7582	1	★	
MIC1	12119-201-890	IC-MPX; KA2265	1		
IIC1	12119-202-510	IC-AM, FM IF; LA1267	1		
HIC1	12119-203-220	IC-FREQ SYNTHESIZER; LM7000	1		
HEF1, HEF2	12139-601-200	TRANSISTOR SILICON; 2SK 583	1		
MQ1, HQ1, HQ2	12149-101-520	TRANSISTOR; KSA733-Y, TAPE	3		
IQ2	12149-301-810	TRANSISTOR; KSC1674-0, TAPE	1		
IQ1, MQ2R, MQ2L, UQ1	12149-301-900	TRANSISTOR; KSC 945-Y, TAPE	4		
RQ1	12149-401-070	TRANSISTOR; KSD73-Y	1		
ID1, ID2, MD1, MD2, MD3, MD4	12169-301-290	DIODE-SW; 1SS53/1N4148, CT: 6 PF	6		
MD5, RD3, UD1, UD2, RD1, RD4			6		
RD5, HD1, OD1, OD2			4		
RZD3	12169-403-240	DIODE-ZN; 1W9.4-10.6V UZP-10B	1		
RZD2	12169-403-740	DIODE-ZN; 1N12.4-14.1V UZP 13B	1	★	
RZD1	12169-404-110	DIODE-ZN; RD5.6FB/UZP-5.6B	1		
OCT4	12169-501-005	DIODE; KV 1236	1		
LCD	12339-101-050	LCD; 8101MJP TUNER	1	★	
MLF1L, MLF1R	12450-304-040	LOW PASS FILTER; FV-A D-BASE 19K/38K	2		
UZD1	12169-403-200	DIODE-ZN; RD407E/4.7BM	1		
IL3	12619-030-005	COIL-CAN; AC 450KHZ YEL	1		
OL1	12619-047-203	COIL-CAN; AD 110UH 796KHZ RED	1		
IL1	12619-240-100	TRANS-FM DET1; 7MM CAN, 10.7MHz	1		
OL3	12619-411-000	MW ANT COIL; 207BLRZ-K5026N-KR	1		
			1		

LOCATION NO.	CODE NO.	DESCRIPTION AND SPECIFICATION	Q'TY	NEW	NOTE
REMO-CABLE	13028-904-876	MODULE CORD; 4P/4CX800	1		
L1, 2, 3	13059-201-143	LEAD FASTEN; RING 140M/M BLK	3		
PLUG-PHONO	13324-500-310	PLUG-PHONO; CONNECTOR 1200MM	1		
REMO-JACK	13339-616-010	MODULE JACK; 616 PCB4-D	2		
CW4	13349-512-561	CONNECTOR-WAFER; STICK5267-02A 2P-TYPE	1		
CW1, 2, 3, LAMP	13349-512-562	CONNECTOR-WAFER; STICK5267-04A 4P-TYPE	4		
MODE	13529-203-900	SWITCH-PUSH; SPH 221A	1		
IX1	14529-302-070	FILTER-CERAMIC; BFU 450C-4N	1		
ICF4	14529-304-610	FILTER CERAMIC; AHCM2-450BL	1		
UX1	14534-504-040	CERAMIC-RESONATOR; CSA 4.00MG	1		
HX1	14539-501-050	CRYSTAL; HC-18/U 7.2MHz	1		
MCF1	14539-501-400	FILTER-CERAMIC; CSB 456 F11	1		
OUTPUT	13339-544-040	JACK-RCA; ABS & BST2 2P (S-348)	1		
	13559-901-080	TACK-SWITCH; SKHH PP030A	18		
CW4	13078-472-120	CONNECTOR-WIRE; 1007 # 26 2P 200MM	1		
CW3	13078-474-120	CONNECTOR-WIRE; 1007 # 26 4P 200MM	1		
CW1, CW2	13078-474-130	CONNECTOR-WIRE; 1007 # 26 4P 300MM	1		
CW5, CW6	13052-900-190	CONNECTOR-WIRE; 2554 #28 7P 200MM	2		
CW5, CW6	13349-159-070	CONNECTOR-WAFER; B7B-PH-K	2		
ANT-TERMINAL	13304-503-610	TERMINAL-ANT; ABS 4T (KC)	1		2 BAND
POWER	13349-511-547	CONNECTOR-WAFER; 5268-05A	1		2 BAND
POWER-SW	13529-203-940	SWITCH-PUSH; SUF 12 25V 1A	1		2 BAND
ANT-AM	14509-250-010	ANT-AM LOOP; LM-500WR	1		2 BAND
FEP	14519-809-040	FM FRONT END PACK; F3615 (300)	1		2 BAND
ICF2, 3	14529-301-760	CERAMIC FILTER; SFE 10.7 MA8H-A	3		2 BAND
CW2, POWER	13349-511-562	CONNECTOR-WAFER; 5267 04A 4P TYPE	2		LWBAND
ICF2, 3	14529-301-750	CERAMIC FILTER; SFE 10.7 MS3G-A	2		LW BAND
IL2	12429-010-130	COIL-CHOKE, RND; 470UH-K Q60 F2R7	1		LW BAND
ANT-TERMINAL	13539-031-050	SOCKET-ANT TERMINAL; AS1/2-1058	1		LW BAND
F.E.P	14519-809-050	FM FRONT END PACK; F-3018 (75)	1		LW BAND
HFE1	12139-601-200	TRANSISTOR SILICON; 2SK 583	1		LW BAND
HQ3	12149-101-520	TRANSISTOR; KSA733-Y, TAPE	1		LW BAND
HD2, 3, UD5	12169-301-290	DIODE-SW; 1SS53/IN4148, CT. 6PF	3		LW BAND
OTC2, 4	11829-512-030	C-TRIMMER; TZ03R 20PF	2		LW BAND
OQ1, 2	12139-305-670	TRANSISTOR; KTC 2240-BL	2		LW BAND
OQ3, 4	12149-301-900	TRANSISTOR; KSC945-Y TYPE	2		LW BAND
OL2	12619-047-202	COIL-CAN; AD510UH 220KHz BRN	1		LW BAND
OL4	12619-566-913	TRANS-TEN, CAN; AF2.4MH FLW RED	1		LW BAND

17-2. MECHANICAL PARTS

NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY	NEW	NOTE
1	16001-607-320	PANEL-FRONT	HIPS 94HB RS1200T EXP	1	★	OPTION
2	17622-502-010	KNOB-TUNING	ABS 94HB BLK	1	★	
3	17624-621-210	KNOB-BAND	ABS AU PLATING	1	★	
4	17623-573-210	KNOB-PRESET	ABS 94HB BLK	1	★	
5	17623-573-810	KNOB-MEMORY	ABS 94HB BLK	1	★	
6	13014-581-210	PWB-TUNER	330 x 247 1.6T IVO RS1200T	1	★	
7	16602-502-310	HOLDER-LCD	ABS WHT + Ti02	1	★	
8	17654-559-220	FILTER-LCD	PC0.5T SMOKE WHT	1	★	
9	12339-101-050	LCD	8101MJP TUNER	1	★	
10	17624-521-510	KNOB-MODE	ABS 94HB BLK	1	★	
11	13529-203-940	SWITCH-PUSH	SUF 12-25V 1A	1	★	
12	17624-606-110	KNOB-POWER	ABS 94HB BLK	1	★	
13	16601-500-410	CABINET-BOTTOM	SECC 0.7T	1	★	
14	16072-500-110	FOOT	ABS 94HB H/ST AMP	2		
15	16072-500-120	FOOT-1	ABS 94HB BLK	2		
16	16804-516-610	CUSHION-FOOT	SPONGE 3.0T	4		
17	13014-581-210	PWB-TUNER	330 x 247 1V0	1	★	
18	13304-503-610	TERIMNAL-ANT	ABS 4T	1		
19	13339-544-040	JACK-RCA	ABS & BST2 2P	1		
20	13349-511-547	CONNECTOR-WAFER	5268-05A	1		
21	13339-616-010	MODULE JACK	6 16PCB4-D	2		
22	16624-570-910	BRKT-GND	BSTE 0.3T	2	★	
23	16122-534-990	CHASSIS-REAR	SECC 0.6T RS1200T/SHS	1	★	
24	16102-506-310	CABINET-TOP	PVC STEEL 0.75 x 547 x 256	1	★	
27	17654-558-410	WINDOW-TUNER	PVC 2.0T CLEAR GOLD (HI FI	1	★	
28	18024-600-530	BADGE-BRAND	COPPER 0.3T	1		OPTION
29	17458-230-101	SCREW-TAP TITE BH	B-3 x 10 FZY	12		
30	17458-230-103	SCREW-TAP TITE BH	B-3 x 10 FZB	11		
31	17128-540-183	SCREW-TAP,TH	2S-4 x 18 FZB	4		